

In the claims

Kindly cancel claims 5-19 as follows, without prejudice.

1. (Original) A light-sensing pixel, having a p type doped region, in a CMOS image sensor, comprising:

a first doped charge collecting region buried within the p type doped region and configured to operate as a depleted potential well;

a first n+ type doped plug extending from near the surface of the image sensor to the first charge collecting region;

a second doped charge collecting region buried within the p type doped region, the second charge collecting region vertically separated from the first charge collecting region by the p type doped region and configured to operate as a depleted potential well; and

a second n+ type doped plug extending from near the surface of the image sensor to the second charge collecting region.

2. (Original) The pixel of claim 1, the first and second charge collecting regions further comprising:

a first extension with n+ type doping coupled to and between the first charge collecting region and the first plug, and having a different doping concentration than the first charge collecting region; and

a second extension with n+ type doping coupled to and between the second charge collecting region and the second plug, and having a different doping concentration than the second charge collecting region.

3. (Original) The pixel of claim 2 wherein the first and second extensions are configured to operate not fully depleted of mobile charge.

4. (Original) The pixel of claim 1 wherein the first n+ type doped plug contacts the first charge collecting region in its center.

5-21. (Cancelled)